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| **Just what is average?** | |
| |  | | --- | | Michael Blastland |   **The "average" salary is £24,000, but most people earn less. Most people have an "above average" number of feet. In his fourth lesson of a weekly series, author Michael Blastland cracks the myth of the average.**  **Lesson Four:** Averages  **The story:** Productivity in the UK is below average for the G7 group of leading economies. Put bluntly, we're rubbish.  **The flaw:** Productivity is also "below average" in France, "below average" in Canada, Germany and Italy and, yes, "below average" in Japan. That is, in six out of seven of the countries in the G7, productivity is "below average".   |  | | --- | | Feet  Think the average number of feet is two? Think again |   **The lesson:** If the thought that nearly everyone can be below average makes no sense, you might be muddled by the middle.  "Average" is commonly used to mean something like "ordinary", "typical", "normal" or "what's expected". Above is good, below is bad.  Most people remember from school that there are different kinds of average. But what mostly endures, if news coverage is anything to go by, is the notion that they all have something to do with a vague place which is, roughly, somehow, you know, in "the middle".  So it's easy to be horribly flustered by what is a simple principle - that the average is not necessarily anywhere near the middle. Sometimes, it is miles away. Sometimes it is about as atypical as you can get, and true of no one at all.  If you are still struggling, try this:  What's the average number of feet?  No, not two. The answer is slightly less. Think about it.  This is because the average can be pulled to one side by the influence of a tiny minority of people, in this case, the small number who have fewer than two feet.  Almost everyone has more than the average number of feet.   |  |  | | --- | --- | | http://newsimg.bbc.co.uk/shared/img/o.gif | **MISSED LESSONS 1-3?**  http://newsimg.bbc.co.uk/nol/shared/img/v3/inline_dashed_line.gif  [Lesson One: Our survey says](http://news.bbc.co.uk/2/hi/uk_news/magazine/7542886.stm)  [Lesson Two: Myth of counting](http://news.bbc.co.uk/2/hi/uk_news/magazine/7554022.stm)  [Lesson Three: Percentages](http://news.bbc.co.uk/2/hi/uk_news/magazine/7568929.stm) |   With productivity, the United States is the 800lb gorilla pulling the average to one side, away from what everyone else in the G7 achieves.  In fact, the UK is more or less indistinguishable from Canada, Italy and Germany, a bit ahead of Japan, and slightly behind France (if the data is reliable, see lesson two for why it often isn't). Only the US is really out in front (though we have been catching up).  **Junk rating: Two out of five. The "average" part of this story is useless. But productivity figures themselves are worth keeping an eye on, particularly as they change over the years.**  With incomes, to take another example, many people are aware that the average in the UK (also known as the mean) is about £24,000 a year (in fact, about £463 a week).  Less well known is that well over half of us (about two thirds, in fact) earn less than average. This is because there are enough income centipedes - millipedes even - to pull the average well above what's typical  The chart shows a measure of the income distribution (how incomes are shared out) in the UK, divided into bands, each band representing 10% of the population.  You can see the average (the mean) marked on the chart. You can also see a large mound of people below it.  Graph showing    If you lined everyone up according to income, the person who was truly in the middle, the median, would have been on about £377 week, that is about £86 a week below average.  Pick a person at random and their most likely income will be between about £200 and £300 a week.  So for a "typical" weekly income in the UK, you could - and I would - choose £377 (nearly 20% below average). Or you might say that it is between £200 and £300 (from about 65 to 35% below average).  In short, if you want to know what's typical, or normal, or in the middle, treat averages with care. In particular, beware gorillas and centipedes. They don't make averages useless, far from it, but knowing they are there helps no end to work out what the numbers really tell you.  **Classroom reminder:** When you see "average" in the news, it is usually the arithmetical mean. With incomes, this is what you get if you add all incomes together then divide the total by the number of people. If you line everyone up according to income, the median is what's earned by the person who stands in the middle of the line. The mode is the income around which more people are grouped than any other.  **Next week, Lesson Five: Causation**  **Michael Blastland is the author, with Andrew Dilnot, of The Tiger That Isn't.** |  |